APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/295,676	04/21/1999	HILLEL GAZIT	04/119801	7459

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EXAMINER
FERRIS, DERRICK W

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 12/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _25 October 2002_ .

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,2,7,8 and 12_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1,2,7 and 12_ is/are rejected.

7)☒ Claim(s) _8_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _21 April 1999_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

     If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____ .

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

     a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)	4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5)☐ Notice of Informal Patent Application (PTO-152)
3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6)☐ Other: .

DETAILED ACTION

Response to Amendment

1.   **Claims 1,2,7,8 and 12** as amended are still in consideration for this application.

Applicant has cancelled claims 3-6,9-11, and 13-14.

2.   Examiner withdraws the 112-first paragraph rejection in reference to Office action dated

6/13/02 (in reference to line item 2-4). Applicant has canceled the rejected claims 2, 9, and 14.

Thus only claim 8 is left in the rejection. Upon further review examiner has decided to withdraw

this rejection for claim 8 since handling a factional value (e.g., 3.13 packets) would have been

obvious to someone skilled in the art.

3.   Examiner withdraws the 112-second paragraph rejection in reference to Office action

dated 6/13/02 (in reference to line item 5). As to claims 1, 8 and 12, the amended claims traverse

the rejection made by the examiner since applicant has made the necessary changes. Examiner

notes the other rejected claims 5,9, 11, and 13 were canceled rendering the rest of the rejection

moot.

4.   Examiner does <u>not</u> withdraw the obviousness rejection over *Tahara et al.* in view of

Hurst. Examiner notes the claims as amended could still be rejected. Therefore, the rejection

stands for the claims as necessitated by amendment.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   **Claims 1,2,7, and 12 as amended** are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent No. 5,894,328 to Tahara et al. in further view of U.S. Patent No.

6,038,000 to Hurst, Jr using "MPEG-2: A Tutorial Introduction to the Systems Layer" by P A

Sarginson as a reference.

As to **claims 1,7, and 12,** it is well known in the art that a program

comprises one or more elementary streams where an elementary stream is the

name given to a single, digitally coded component of a program, for example

coded video or audio. Each of these elementary streams is typically converted

into a Packetised Elementary Stream (PES). Each PES-packet in a stream may

vary in length and contain a PES-packet header. Within the header, the setting of

flags 'P' and 'D' indicates that a respected Presentation Time Stamp (PTS) and

Decoding Time Stamp (DTS) is present where it is well-known in the art that time

stamps are a mechanism to ensure correct synchronism between elementary

streams in a decoder [P A Sarginson, page 4/4]. As pointed out by *Tahara et al.*,

these time stamps can also be used to represent different aspects of the system

when decoding depending on which standards are used such as ISO 11172-1, ISO

11172-2 and ISO 11172-3 [column 2, lines 56-67; column 3, lines 1-15]. Thus it

is no surprise that *Tahara et al.* discloses that a time stamp may be used for

input/output control of each buffer (e.g., decode buffer). This is exemplified in

figure 5, noting the occupied buffer amount (i.e., decoder buffer of a

predetermined size), if the DTS1 time is smaller than the value of SCR2, the

picture VF1 cannot be extracted at time DTS1 causing a buffer underflow

problem. Thus it also comes as no surprise that *Tahara et al.* also discloses that

within a multiplexer, each elementary stream could be time-divisionally

multiplexed with a suitable length, while the proper time stamp (i.e., PTS and

DTS values) needs to be set on the multiplexed stream, for possibly preventing

breakage in the buffer in the decoder, such as overflow or underflow [column 5,

lines 28-33]. Therefore it is well known in the art at the time of the invention to

recognize a potential data underflow for a said decoder buffer when said decoder

is less than a predetermined size (step a).

However, it may not be clear from *Tahara et al.* on how to solve the

problem by adjusting the DTS and PTS values specifically, only that a problem

exists and that time slices in general may be used to adjust the problem (although

it is also noted that certain values need to be calculated to avoid these problems

[column 10, lines 56-67; column 11, lines 1-47]). Examiner notes that it would

have been obvious to a skilled artisan, prior to applicant's invention to modify this

reference for adjusting the DTS and PTS values. *Hurst Jr.*, recognizes the

problem of underflow [column 1, lines 47-51], and attempts to solve the problem

by specifically adjusting the DTS and PTS values (thus creating a motivation for

combining these references as whole). *Hurst Jr.* notes that there are several rate-

control issues that need to be resolved with switching between various elementary

streams or splicing these streams together [column 14, lines 63-64]. Specifically

a rate control issue can cause an underflow problem due to timestamps in general

and specifically the presentation time of decoded information frames [column 15,

lines 12-22]. Finally, noted before by *Hurst Jr.*, that altering the time stamps can control rate control problems. This includes the general reprogramming of the presentation time stamps (PTS) and the decode time stamps (DTS) of the selected stream where the partial decoding and retiming the PTS and DTS is performed by a PTS and DTS detection and retiming unit 366 to produce a PTS and DTS retimed stream [column 10, lines 30-50]. Thus the reference inherently teaches that adding a predetermined value to the presentation time and decode time avoids a potential underflow problem.

As to **claims 2,** both Tahara et al. [column 1, lines 25-27] and Hurst, Jr. [column 1, lines 19-30] provide support for MPEG-2.

As to **claim 7,** it is noted that adding values to DTS and PTS would have been obvious (see rejection above). The reference (Hurst, Jr.) inherently teaches that the time to be added to these values must exceed the fill capacity of the decoder buffer in order to avoid underflow thus anticipating the concept illustrated in the formula.

Allowable Subject Matter

3.   **Claim 8** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

1.   **Claim 8** would be allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine

any of the said prior art references which teaches when the current buffer size is x to delete a certain number of null packets based on the specific formula as recited in claim 8.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (703) 305-4225. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone numbers for the

organization where this application or proceeding is assigned are (703) 872-9314 for regular

communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 305-3900.

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Derrick W. Ferris
Examiner
Art Unit 2663

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DWF
December 13, 2002

MELVIN MARCELO
PRIMARY EXAMINER